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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,965	07/11/2003	Masaaki Ozawa	116515	2871
25944	7590	03/30/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			MULLIS, JEFFREY C	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/616,965

Applicant(s)

OZAWA ET AL.

Examiner

Jeffrey C. Mullis

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 703.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Since a colloid and a sol are the same thing, it is not clear how claim 3 limits claim 1 from which it depends in that claim 3 merely recites the colloidal silica is a silica sol.

Note applicants' reference "The Chemistry of Silica" at page 11 line 7 which discloses that "silicasol may refer broadly either to polysilicic acid or colloidal silica".

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Erneta (U.S. 3,846,453).

Erneta discloses "microspheres or microcapsules" having individual particle sizes of as low as "0.05" microns, i.e. 50 nanometers which is an amino resin-silica polymeric composite having 70-99.5% of the amino resin. Note column 1 lines 5-25 in this regard.

Note Examples 6 and 7 in the Table in columns 3 and 4 and the description of Examples 5-7 at column 2 lines 55-59 where it is disclosed that the procedure for producing the product of Examples 6 and 7 was performed as in Example 1 but using melamine. Thus a sodium silicate solution was mixed with melamine and the pH lowered to 8 and 9 (see the Table and column 2 lines 13-15 following which the mixture was heated at 60°C for 2 hours and the temperature allowed to drop to 25°C following which the pH was lowered again and the temperature raised to 80°C and reacted for 2 and 1/2 hours. Note in this regard column 2 lines 15-24 as well as the Table showing Examples 6 and 7 and that the pH after the second addition of acid was 3.5, i.e. acidic. The limitations of applicants' step "a" therefore reasonably appear to be met although there is no explicit disclosure of particle size up until line 24 of column 2. Note that column 2 lines 20-24 discloses that after the second addition of acid that a precipitate forms and thus the limitations of applicants' "step b" are met. With regard to applicants' particle size limitation, it is noted that the process of Example 1 conducted using a urea yielded materials with a particle size of higher than 100 nanometers at column 2 lines 25-26. Although it is not disclosed what the particle size of the melamine particles were which will run under identical conditions, as set out above column 1 lines 10-15 discloses that particle sizes are as low as 50 nanometers. It is noted that the particle size recited by applicants' claims is that of step a and that addition of acid would cause further condensation and likely increase in particle size and therefore if anything patentees' particle sizes would be lower than those explicitly recited in that those particle sizes are those recited after the second addition of acid embraced by applicants' "step b", not step a. In any case the claims are not limited as to at what point in step "a" the particle size of 5-70 nanometers is generated and as patentees begin with a solution of silicate and add acid to form particulate silica, a process which would result in

condensation to form larger and larger particles, it would reasonably appear that at some point applicants' particle size as in step "a" would be met. Note the penultimate paragraph on page 10 of "The Chemistry of Silica" submitted by applicants disclosing that "(silica) polymerizes, usually rapidly, at higher concentrations, initially forming polysilicic acids of low molecular weight and then larger polymeric species recognizable as colloidal particles".

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Applicants' discussion in their specification at paragraph 5 thereof of the art relied upon has been reviewed. However the Examiner sees nothing in the discussion in paragraph 5 relating to any limitations which appear in the claims.

Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Mullis whose telephone number is (571) 272-1075. The examiner can normally be reached on Monday-Friday from 9:30 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on (571) 272-1078. The fax phone number for this Group is (703) 872-9306.

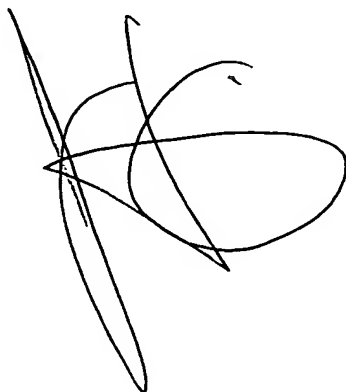
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-0994.

J. Mullis:cdc

March 24, 2005

Jeffrey Mullis
Primary Examiner
Art Unit 1711

A handwritten signature in black ink, consisting of a large, stylized 'J' and 'M' intertwined.